



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,031	05/31/2005	Joel P Dunsmore	10030978-3	1134
22878 7590 07/27/2007 AGILENT TECHNOLOGIES INC. INTELLECTUAL PROPERTY ADMINISTRATION, LEGAL DEPT. MS BLDG. E P.O. BOX 7599 LOVELAND, CO 80537			EXAMINER MERANT, GUERRIER	
			ART UNIT 2117	PAPER NUMBER
			MAIL DATE 07/27/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,031

Applicant(s)

DUNSMORE ET AL.

Examiner

Guerrier Merant

Art Unit

2117

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-20 & 32 is/are allowed.
- 6) ☒ Claim(s) 1-14 and 21-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's arguments/amendments filed 05/14/07, with respect to claims 15-20 and 32 have been fully considered and are persuasive. Previous rejections of claims 15-20 and 32 have been withdrawn. However, applicant's arguments/amendments with respect to claims 1-14, have been fully considered but they are not persuasive

Response to Arguments

2. As per claims 1, 21 and 26, applicants contend that the prior art of record Dunsmore fails to teach " a port-specific difference array". The Examiner respectfully disagrees. Item 140 of figure 1 is the port-specific difference array that is created to record the difference between test fixture (item 430A, fig. 5) and a standard (item 420, fig. 5) (e.g. col. 13, lines 5-20; col. 14, lines 47-67 & col. 15, lines 1-13).

3. Due to the reasons stated above, the Examiner maintains rejections with respect to claims 1-14 and 21-31. The cited prior art of record disclose the limitations that the Applicant suggest distinguish from the prior art. Therefore, claims 1-14 and 21-31 are not patentably distinct or non-obvious over the prior art of record as presented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2117

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1-14 and 21-31 are rejected under 35 U.S.C. 102(e) as being anticipated by **Dunsmore (US 6,643,597 B1)**.

Claims 1, 4-5, 26-28: **Dunsmore** discloses a method of transforming/matching measurements of a device under test (DUT) produced by a test system, the method comprising: determining a port-specific difference array, the difference array describing a difference between a first test fixture and a second test fixture at a corresponding test port of the test fixtures (*col. 14, lines 61-67 & col. 15, lines 1-13*); measuring a performance of the DUT using the test system, wherein the DUT is mounted in the second test fixture; and applying the port-specific difference array, such that the measured DUT performance approximates a hypothetical DUT performance for the DUT mounted in the first test fixture and measured with the test system (*col. 7, lines 55-67 & col. 8, lines 22-40*).

Claims 2-3, 11, 13: **Dunsmore** discloses a method of transforming measurements as in claim 1 above, wherein the determined port-specific difference array is an error adaptor that is applied to the measured performance of the DUT to essentially remove an effect of a port portion of the second test fixture and to add an effect of a corresponding port portion of the first test fixture on the measured performance (*col. 14, lines 61-67 & col. 15, lines 1-13 & col. 18, lines 55-67 & col. 19, lines 1-10*).

Claim 6: **Dunsmore** discloses a method of transforming measurements as in claim 1 above, wherein a performance of one or both of the first test fixture and the second test fixture and a performance of one or more calibration standards of the set used in determining the port-specific difference array are unknown or poorly known (*col. 6, lines 48-57*).

Claim 7: **Dunsmore** discloses a method of transforming measurements as in claim 1 above, wherein determining employs measurements of the test fixtures at a plurality of frequencies in a frequency range of interest for the DUT (*col. 7, lines 33-51*).

Claim 8: **Dunsmore** discloses a method of transforming measurements as in claim 3 above, wherein the calibration standards of the set connect corresponding pairs of ports to one another for each test fixture, such that all combinations of ports in each test fixture are separately connected as pairs for measuring the characteristics (*col. 12, lines 5-21*).

Claims 9, 27: **Dunsmore** discloses a method of transforming/matching measurements as in claims 3 and 27 above, wherein measuring comprises: measuring a reflection parameter of each standard of the set of calibration standards separately for each port of the first test fixture; and measuring a reflection parameter of each standard of the set of calibration standards separately for each corresponding port of the second test

Art Unit: 2117

fixture, wherein one or more of the standards of the set isolate the respective port from other ports of the respective test fixture (*col. 12, lines 21-39*).

Claim 12: Dunsmore discloses a method of transforming measurements as in claim 3 above, wherein solving for elements comprises: optimizing a model using the measured results for each test fixture, the model representing one or more of the port-specific difference arrays, wherein optimizing comprises adjusting parameters of the model until a difference between test fixture measurements is minimized, the test fixture measurements being converted measurements of the second test fixture produced by the model using the measured results for the second test fixture and the measured results for the first test fixture, the model parameters representing the elements of the difference array (*col. 8, lines 1-35*).

Claims 14, 29-31: Dunsmore discloses a method of transforming/matching measurements as in claims 3 and 26 above, wherein solving for elements of the difference array comprises determining a complex square root of one of the elements, wherein the square root is determined using data representing the element at more than one frequency (*col. 13, lines 51-62*).

Claims 21-22: Dunsmore discloses a test system that measures a device under test (DUT) using different test fixtures comprising: test equipment (*item 410, fig. 5*); a test fixture that interfaces the DUT to the test equipment (*item 430, fig. 5*); a computer

Art Unit: 2117

connected to receive and process data from the test equipment (*item 440, fig. 5*); and a computer program (*item 530, fig. 6*) executed by the computer, the computer program comprising instructions that, when executed by the computer, implement determining a port-specific difference array that adjusts for a difference between a first test fixture and a second test fixture when each is used to interface the DUT for measurements (*col. 19 lines 16-47*).

Claim 23-24: **Dunsmore** discloses a test system as in claim 22 above, wherein the instructions that implement applying comprise applying the difference array directly to the measured performance of the DUT produced by the test system to transform the measured DUT performance into the hypothetical DUT performance (*col. 7, lines 55-67 & col. 8, lines 22-40*).

Claim 25: **Dunsmore** discloses a test system as in claim 21 above, wherein the computer program further comprises instructions that implement determining a complex square root of an element of the difference array using values of the element at a plurality of frequencies (*col. 13, lines 51-62*).

Allowable Subject Matter

6. Claims 15-20 and 32 are allowed.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exr. Merant Guerrier whose telephone number is (571) 270-1066. The examiner can normally be reached Monday through Thursday from 10:30 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis Jacques, can be reached on (571) 272-6962. Draft or Informal faxes, which will not be entered in the application, may be submitted directly to the examiner at (571) 270-2066.

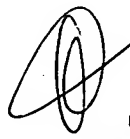
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

Art Unit: 2117

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Guerrier Merant
07/11/07



GUY LAMARRE
PRIMARY EXAMINER